

1 Illinois offers the CLECs an end-to-end wholesale Broadband Service, from the
2 end user's premises to Ameritech Illinois' central office, for incorporation into the
3 CLECs' own DSL services for their individual end users.

4
5 **Q. YOU HAVE EXPLAINED PREVIOUSLY THAT AMERITECH**
6 **ILLINOIS' BROADBAND SERVICE UTILIZES THE PROJECT**
7 **PRONTO ARCHITECTURE AND EXISTING COPPER DISTRIBUTION**
8 **PAIRS. PLEASE DESCRIBE THE COMPLETE PATH THROUGH**
9 **THESE NETWORK COMPONENTS TAKEN BY A SPECIFIC END**
10 **USER'S DSL SERVICE.**

11 A. For a CLEC to provide DSL service to a single end user with the Broadband
12 Service, the path through the various network components would include:
13 • a copper pair from the end user's premises to the NGDLC RT;
14 • a port on a multi-port line card in the NGDLC RT;
15 • a virtual circuit established within the NGDLC RT;
16 • a virtual circuit established in the OC-3c signal riding over the fibers between
17 the NGDLC RT and the OCD; and
18 • a virtual circuit established through the OCD to a CLEC's high-capacity port
19 on a multi-port OCD card.

20 As this list demonstrates, a single end user's DSL service does not occupy an
21 accessible, physical, end-to-end path through these various network components.
22 This list also shows that the physical network components used by the CLEC do
23 not bear a one-to-one correspondence throughout a DSL service's path. For
24 instance, a CLEC uses a copper pair at one end (which carries a single end user's

²⁰ 251(d)(2)(A) and (B)

DSL service), yet an OCD port at the other end (which carries numerous end users' DSL services).

Q. HOW DOES THE END-TO-END BROADBAND SERVICE PROVIDED OVER THE PROJECT PRONTO ARCHITECTURE COMPARE TO UNES IN AMERITECH ILLINOIS' NETWORK?

A. Consider unbundled network elements ("UNEs") such as unbundled dedicated transport ("UDT") and unbundled high-capacity loops. Each of these UNEs represents and provides the CLEC with a specific and constant amount of total bandwidth within the ILEC's underlying facility (e.g., a SONET transport facility). In addition, each of these UNEs is accessible at both end-points of the UNE with the same interface specifications (*i.e.*, bandwidth, signal characteristics, and physical connection). Ameritech Illinois' end-to-end wholesale Broadband Service does neither of these things.

Q. CAN YOU PROVIDE AN EXAMPLE?

A. Yes. A DS-3 UDT UNE occupies a fixed piece of bandwidth (approximately 45 Mbps) within a higher-bandwidth, underlying transport facility. In some instances, this UNE may traverse more than one such facility connected in tandem between the two end-points of the UNE. The bandwidth of this UDT is constant throughout the entire length of the UNE. In addition, the UDT's bandwidth occupies an unchanging position within the digital multiplexing hierarchy of an underlying transport facility. This UDT is also accessible at each end with the same DS-3 bandwidth, same electrical signal characteristics, and same physical coaxial connection.

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**Q. HOW DO THE VIRTUAL CIRCUITS ESTABLISHED WITHIN THE
END-TO-END WHOLESALE BROADBAND SERVICE DIFFER FROM
THE UDT DESCRIBED ABOVE?**

A. Unlike the UDT described in the paragraph above, the virtual circuits established for DSL services through the Project Pronto NGDLC RT, OC-3c data transport fibers, and OCD do not occupy a specific and fixed piece of bandwidth. In other words, while these virtual circuits do share the same Project Pronto equipment and transport facility, they do so only in a statistical (*i.e.*, variable) manner, not as specific, fixed amounts of bandwidth for each virtual circuit. Therefore, various CLECs' end user circuits literally share the very same bandwidth in the Project Pronto architecture, and even then, only virtually, not physically.

In addition, these virtual circuits do not have the same interface characteristics at each end. At one end, the virtual circuit for one DSL end user can only be physically accessed as a two-wire metallic DSL-formatted interface that connects to the copper pair extending to that end user's premises. At the other end, the virtual circuit for that same end user exists only within the ATM-formatted high-bandwidth signal delivered to a port on the OCD, which contains not one but many virtual circuits for different end users' DSL services. In contrast, as described above, UDT can be accessed on a circuit-by-circuit basis with the same bandwidth and interface specifications at both ends. Therefore, the dissimilar interfaces at the ends of the Project Pronto architecture and the related wholesale Broadband Service do not allow this configuration to be unbundled as discrete network elements for a CLEC's use.

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2 **Q. DOES THE PROJECT PRONTO ARCHITECTURE CONSIST OF**
3 **PACKET SWITCHING EQUIPMENT?**

4 A. Yes. In its Project Pronto Order, the FCC found that the Project Pronto NGDLC
5 RT is functionally equivalent to a DSLAM,²¹ and that the Project Pronto OCD is
6 ATM switching equipment.²² Further, the FCC found in its UNE Remand Order
7 that this type of equipment is packet switching equipment.²³

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9 **Q. DID THE FCC REQUIRE THE UNBUNDLING OF PACKET**
10 **SWITCHING?**

11 A. No. The FCC decided against a general requirement to unbundle packet
12 switching, stating in its UNE Remand Order that "given the nascent nature of the
13 advanced services marketplace, we will not order unbundling of the packet
14 switching functionality as a general matter."²⁴ The FCC went on to say:

15 "the record in this proceeding, and our findings in the *706 Report*,
16 establish that advanced services providers are actively deploying
17 facilities to offer advanced services such as xDSL across the
18 country. ... [C]arriers have been able to secure the necessary
19 inputs to provide advanced services to end users in accordance
20 with their business plans. This evidence indicates that carriers are
21 deploying advanced services to the business market initially as
22 well as the residential and small business markets."²⁵

23

24 **Q. UNDER WHAT CIRCUMSTANCES DID THE FCC REQUIRE THE**
25 **UNBUNDLING OF PACKET SWITCHING?**

²¹ Project Pronto Order, par. 14.

²² Id., par. 18.

²³ UNE Remand Order, paragraphs 177, 302, and 303.

²⁴ Id., paragraph 306.

²⁵ Id., paragraph 307.

1 A. The FCC's UNE Remand Order defines the limited circumstances under which
2 packet switching must be unbundled.²⁶ Specifically, the FCC's rules provide:

3 (B) An incumbent LEC shall be required to provide
4 nondiscriminatory access to unbundled packet switching capability
5 only where each of the following conditions are satisfied:

6 (i) The incumbent LEC has deployed digital loop carrier systems,
7 including but not limited to, integrated digital loop carrier or
8 universal digital loop carrier systems; or has deployed any other
9 system in which fiber optic facilities replace copper facilities in the
10 distribution section (e.g., end office to remote terminal, pedestal or
11 environmentally controlled vault);

12 (ii) There are no spare copper loops capable of supporting the
13 xDSL services the requesting carrier seeks to offer;

14 (iii) The incumbent LEC has not permitted a requesting carrier to
15 deploy a Digital Subscriber Line Access Multiplexer at the remote
16 terminal, pedestal or environmentally controlled vault or other
17 interconnection point, nor has the requesting carrier obtained a
18 virtual collocation arrangement at these subloop interconnection
19 points as defined by § 51.319(b); and

20 (iv) The incumbent LEC has deployed packet switching capability
21 for its own use.²⁷

22 Two aspects of these FCC rules warrant emphasis. The requirement to unbundle
23 the packet switching equipment described in the fourth condition is (1) dependent
24 on the simultaneous existence of all four of these conditions in a particular service
25 area, and (2) determined on an RT site-by-RT site basis.

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27 **Q. DO THESE CONDITIONS APPLY TO AMERITECH ILLINOIS'**
28 **PROJECT PRONTO DEPLOYMENT?**

29 A. No. These four conditions will not exist with the deployment of Project Pronto.

30 The first condition involves the presence of DLC or the replacement of copper

²⁶ Id., paragraph 313.

²⁷ 47 C.F.R. 51.319(c)(3)(B) (emphasis added).

1 loops with fiber. DLC already exists in many serving areas; also, Project Pronto
2 deploys NGDLC in many serving areas. However, Project Pronto does not result
3 in the replacement of copper loops with fiber, as I explained previously.
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5 The second condition concerns the availability of copper loops. Copper loops
6 will be available to the CLECs in most serving areas. As I explained above, the
7 deployment of Project Pronto does not displace any existing copper loops, and, in
8 fact, will usually free up working copper loops for future CLEC use.
9

10 The third condition concerns the ability of a CLEC to remotely locate its DSLAM
11 equipment at Ameritech Illinois' RT site. Ameritech Illinois does permit a CLEC
12 to collocate its DSLAM equipment in an RT site where space and other
13 environmental factors allow. In addition, SBC's voluntary commitments, adopted
14 in the FCC's Project Pronto Order,²⁸ enhance the CLECs' opportunity to collocate
15 their own DSLAMs at or near the Ameritech Illinois' RT sites. Specifically,
16 Ameritech Illinois will, upon a CLEC's request, either increase the size of future
17 RT structures or provide the CLEC with an adjacent cabinet structure.
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19 The fourth condition involves Ameritech Illinois' deployment of packet switching
20 for its own use. With Project Pronto, Ameritech Illinois is not deploying any
21 packet switching equipment for its own use. The DSL-capable portion of the
22 Project Pronto NGDLC RT and the OCD equipment are being deployed by

²⁸ Project Pronto Order, paragraphs 34, 35, and 61; and Appendix A. paragraph 5.

Ameritech Illinois only for CLECs' use in provisioning their own retail DSL services to end users.

Q. YOU PREVIOUSLY STATED THAT NETWORK ELEMENTS MUST NOT BE UNBUNDLED WITHOUT AN ANALYSIS SATISFYING THE "NECESSARY" AND "IMPAIR" STANDARDS ESTABLISHED IN THE ACT. WHAT ARE THESE STANDARDS?

A. In determining which network elements should be made available to CLECs on an unbundled basis, the Act requires an evaluation of whether

(A) access to such network elements as are proprietary in nature is necessary; and

(B) the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer.²⁹

Q. REGARDING THE "NECESSARY" STANDARD, ARE THERE ANY PROPRIETARY ASPECTS TO THE PROJECT PRONTO ARCHITECTURE?

A. Yes. Each manufacturer's equipment used in the Project Pronto architecture is proprietary to that manufacturer. That is, another manufacturer's equipment (e.g., plug-in cards) cannot be used within these pieces of equipment. For instance, only line cards manufactured by Alcatel can be used in the Alcatel Litespan NGDLC equipment. Mr. James Keown addresses this in more detail in his testimony. However, the FCC has found in its UNE Remand Order that the proprietary nature of these manufacturers' individual items of equipment does not relate to the "necessary" standard set out by the Act.³⁰

1 **Q. IS THE "IMPAIR" STANDARD FOR UNBUNDLING APPLICABLE TO**
2 **PROJECT PRONTO?**

3 A. Yes.

4

5 **Q. IF PROJECT PRONTO AND THE WHOLESALE BROADBAND**
6 **SERVICE ARE NOT UNBUNDLED, WILL THE CLECS BE IMPAIRED**
7 **IN THE PROVISIONING OF DSL SERVICES?**

8 A. No. Neither the Project Pronto architecture nor the wholesale Broadband Service
9 offering have to be unbundled for CLECS to be able to provide DSL services to
10 their end users.

11

12 **Q. CAN YOU PLEASE EXPLAIN WHY?**

13 A. Yes. Absent the voluntary deployment of SBC's Project Pronto initiative, CLECs
14 would have the ability to provide DSL services to end users using either their own
15 central office-based DSLAMs and Ameritech Illinois' full copper loops (as stand-
16 alone UNE loops or the related HFPL UNEs), or their own remotely-located
17 DSLAMs and Ameritech Illinois' copper subloops (as stand-alone UNE subloops
18 or the related HFPL UNEs). These options would be the same for any CLEC,
19 including Ameritech Illinois' advanced services affiliate.

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21 Assume for a moment that SBC had never voluntarily initiated the Project Pronto
22 deployment. Certainly, CLECs could not be impaired without unbundled access
23 to a non-existent broadband network (*i.e.*, a broadband network that SBC had
24 never deployed in Illinois).

²⁹ 251(d)(2)(A) and (B).

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2 However, Ameritech Illinois is voluntarily deploying Project Pronto, and is
3 offering its end-to-end wholesale Broadband Service over this new architecture to
4 all CLECs. As I explained previously, this Broadband Service provides CLECs
5 with an additional option for offering DSL services to their end users, above and
6 beyond the pre-existing network options available to the CLECs. Therefore, all of
7 these CLECs have a completely equal opportunity to utilize yet another option to
8 provide DSL services. Therefore, no CLEC is impaired without unbundled access
9 to Project Pronto and/or the associated Broadband Service.
10

11 **Q. CAN YOU SUMMARIZE THE CLECS' OPTIONS FOR OFFERING DSL**
12 **SERVICES IF PROJECT PRONTO IS NOT UNBUNDLED?**

13 **A.** Yes. The options available to CLECs for providing DSL services include the
14 following:

- 15 • CLECs may utilize Ameritech Illinois' end-to-end wholesale Broadband
16 Service offering.
- 17 • CLECs may also continue to utilize Ameritech Illinois' full, unbundled copper
18 loops with their own central office-based DSLAMs to provide DSL services.
19 Because Project Pronto is an overlay network design, Ameritech Illinois'
20 existing copper facilities will still be available to CLECs as UNEs. Also,
21 because Ameritech Illinois' wholesale Broadband Service allows an end user's
22 POTS and ADSL service to be provided over the Project Pronto network

³⁰ UNE Remand Order, paragraph 38.

1 architecture, use of the Broadband Service in this manner will actually free
2 additional existing copper facilities that were previously used only for POTS.
3 • CLECs may choose to utilize Ameritech Illinois' unbundled copper subloops
4 with their own remotely-located DSLAM equipment (*i.e.*, in or near
5 Ameritech Illinois' RT sites, where space is available and other technical
6 requirements are met).
7 • A CLEC could undertake its own broadband initiative for the benefit of end
8 users in Illinois, and deploy its own infrastructure to provide DSL services to
9 more Illinois end users.

10
11 **IX. OWNERSHIP AND COLLOCATION OF THE NGDLC LINE CARDS**

12 **Q. WHY DO RHYTHMS AND COVAD WANT TO OWN OR DESIGNATE**
13 **THE NGDLC LINE CARDS?**

14 A. There appear to be two reasons that Rhythms and Covad want to own or designate
15 the NGDLC line cards. The first reason is that these CLECs want to be able to
16 provide different "flavors" of DSL using their own types of line cards in the
17 Project Pronto infrastructure. The second reason appears to be another attempt by
18 these CLECs at unbundling the Project Pronto architecture and/or the associated
19 wholesale Broadband Service.

20
21 **Q. IS THE ISSUE OF DIFFERENT "FLAVORS" REALLY A LINE**
22 **SHARING ISSUE?**

23 A. No. Some of the "flavors" (*i.e.*, types) of DSL that Rhythms and Covad
24 apparently want to be able to provide using their own line cards in Ameritech
25 Illinois' NGDLC equipment cannot even be used in a line sharing arrangement.

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Q. WHAT TYPES OF DSL CAN BE LINE-SHARED?

A. As I explained previously, line sharing involves the sharing of the copper pair into the end user's premises by a low-frequency voice signal and a high-frequency data signal. Therefore, this line sharing can occur only with those flavors (*i.e.*, types) of DSL that do not utilize the voice-frequency spectrum on the copper loop. In other words, line sharing can occur only with a limited number of types of DSL, including ADSL, G.lite³¹, and Rate-Adaptive DSL ("RADSL")³².

Q. WHAT OTHER TYPES OF DSL HAVE RHYTHMS AND COVAD INDICATED THEY WANT TO PROVIDE USING THEIR OWN LINE CARDS?

A. Two types of DSL that these CLECs have indicated an interest in being able to provide using their own NGDLC line cards are Symmetric DSL ("SDSL") and an ATM-based High-Bit-Rate DSL ("HDSL"). Neither of these types of DSL can be line-shared.

Q. WHICH OF THE LINE-SHARED TYPES OF DSL CAN BE PROVIDED WITH AMERITECH ILLINOIS' PROJECT PRONTO ARCHITECTURE?

A. The Project Pronto architecture can currently support ADSL. Ameritech Illinois has also committed to making G.lite available on an RT-by-RT basis starting within six months after development and commercial availability from the

³¹ G.lite is a form of asymmetrical DSL similar to ADSL, but with lower speeds and splitters at the end users' premises that can be installed by the end users.
³² RADSL is another form of ADSL that has the capability of adapting speed to actual loop conditions on an session-by-session basis.

1 NGDLC manufacturer.³³ Alcatel has no current plans to develop an RADSL line
2 card for the Litespan NGDLC because its existing ADLU line card is already
3 capable of adapting DSL speed to line conditions in the same manner as the
4 RADSL technology. The availability of other types of line cards, whether for
5 line-shared forms of DSL or not, is addressed in the testimony of Mr. James
6 Keown.

7
8 **Q. IN GENERAL, WHAT COMMITMENTS HAS AMERITECH ILLINOIS**
9 **MADE REGARDING THE DEPLOYMENT OF DIFFERENT TYPES OF**
10 **LINE CARDS IN THE PROJECT PRONTO NGDLC?**

11 A. Ameritech Illinois will work collaboratively in the future with individual CLECs,
12 groups of CLECs, and the industry at large to introduce additional capabilities
13 into the Project Pronto architecture, subject to the criteria outlined in the FCC's
14 Project Pronto Order.³⁴

15
16 **Q. WHAT ARE THESE CRITERIA?**

17 A. One of these criteria is that the introduction of an additional feature or capability
18 into this architecture will not impair the capacity of the deployed Project Pronto
19 NGDLC RTs. It would be completely unreasonable for Ameritech Illinois to be
20 forced to introduce such a new feature or capability into its network if doing so
21 would strand any part of Ameritech Illinois' considerable investment in Project
22 Pronto NGDLC RTs, or otherwise impair other present and future end users from

³³ Project Pronto Order, Appendix A, paragraph 4.

³⁴ Id., Appendix A, paragraphs 4(a), 4(b), and 8.

1 receiving advanced services and POTS through these NGDLC RTs. Mr. James
2 Keown addresses these capacity considerations in more detail in his testimony.

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4 Another criterion is that such introductions are technologically and operationally
5 feasible in Ameritech Illinois' network architecture. Additional criteria include
6 the existence of a reasonable market or CLEC commitment for the new capability,
7 and a willingness by the CLEC(s) to pay for Ameritech Illinois' reasonable costs
8 for that new capability.

9
10 **Q. CAN ANY MANUFACTURER'S DSL LINE CARDS BE USED IN THE**
11 **PROJECT PRONTO NGDLC RTS?**

12 A. No. As I mentioned previously, only the NGDLC manufacturer's line cards can
13 be used in its NGDLC equipment. This is primarily because these NGDLC
14 systems are software-driven, and each manufacturer's software is proprietary.
15 Mr. James Keown addresses this in more detail in his testimony.

16
17 **Q. YOU STATED THAT THE SECOND REASON THE CLECS WANT TO**
18 **OWN OR DESIGNATE THE NGDLC LINE CARDS APPEARS TO BE**
19 **ANOTHER ATTEMPT AT UNBUNDLING PROJECT PRONTO AND/OR**
20 **THE BROADBAND SERVICE. HOW DOES CLEC LINE CARD**
21 **OWNERSHIP AND/OR DESIGNATION RESULT IN THE UNBUNDLING**
22 **OF THE PROJECT PRONTO ARCHITECTURE OR THE BROADBAND**
23 **SERVICE?**

24 A. For the CLEC to own or designate the line card in the RT, this would constitute
25 de facto collocation of that line card. The Act and the FCC's implementing rules
26 require collocation of equipment necessary for interconnection or access to UNEs.
27 If the CLEC is allowed to own or designate these cards under the guise of

1 collocation, that would, in effect, mean that the network elements to which that
2 card connects would have to be UNEs.

3
4 **Q. WOULD IT BE APPROPRIATE TO AUTHORIZE THE CLECS TO OWN**
5 **OR DESIGNATE THE NGDLC LINE CARDS AS A WAY TO REQUIRE**
6 **PROJECT PRONTO OR THE BROADBAND SERVICE TO BE**
7 **UNBUNDLED?**

8 A. No. In fact, such a result would be "placing the cart before the horse." In other
9 words, collocation is necessary only for equipment that provides access to
10 existing UNEs. Before such collocation of line cards could be required, it would
11 first have to be established that Project Pronto or the Broadband Service would
12 have to be unbundled in accordance with the federal standards I discussed above.
13 Deciding on new collocation requirements just to establish new UNEs in
14 Ameritech Illinois' network is inappropriate and backwards.

15
16 **Q. GIVEN THE CURRENT STATUS OF UNES IN AMERITECH ILLINOIS'**
17 **NETWORK, DO YOU AGREE THAT CLEC LINE CARD OWNERSHIP**
18 **OR DESIGNATION SATISFIES THE FEDERAL REQUIREMENTS FOR**
19 **COLLOCATION?**

20 A. No. The CLEC proposal is clearly inconsistent with the FCC's criteria for
21 collocation of equipment for two reasons. First, a piece-part of a unit of
22 equipment, such as an RT line card, does not constitute equipment appropriate for
23 collocation. Second, placement of a line card into Ameritech Illinois' RT
24 equipment does not provide a CLEC with access to any current UNEs or
25 interconnection to Ameritech Illinois' network.

1 Q. HOW DOES THE FCC DEFINE SPACE FOR PHYSICAL
2 COLLOCATION?

3 A. In its Local Competition Order, the FCC specifically states that ILECs must
4 "offer physical collocation, with the interconnecting party paying the LEC for
5 central office floor space."³⁵ In other words, the FCC defined collocation
6 physical space only as floor space.
7

8 Q. WHAT IS THE MINIMUM FLOOR SPACE REQUIRED TO
9 COLLOCATE?

10 A. The FCC established in its Advanced Services Order a minimum requirement
11 where CLECs "can purchase space in increments small enough to collocate a
12 single rack (i.e., bay) of equipment" in cageless collocation.³⁶
13

14 Q. WHAT MINIMUM COLLOCATION SPACE WILL AMERITECH
15 ILLINOIS PROVIDE IN ITS REMOTE TERMINALS?

16 A. Consistent with this Commission's decisions, Ameritech Illinois provides
17 collocation space in increments of a single rack in a CO, and as small as a two-
18 inch rack space in an RT site, where physical space and other factors (e.g., heat
19 dissipation and power consumption) allow. However, the collocation of just a
20 sub-component within a shelf of Ameritech Illinois' equipment mounted in a rack
21 is not consistent with either this Commission's collocation decisions or the FCC's
22 definition of collocation space.

³⁵ In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, First Report and Order, FCC 96-325 (released August 8, 1996) ("Local Competition Order"), paragraph 559 (emphasis added).

³⁶ In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, First Report and Order and Further Notice of Proposed Rulemaking, FCC 99-48 (released March 31, 1999) ("Advanced Services Order"), paragraph 43.

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2 **Q. WHAT DOES THE FCC DESCRIBE AS EQUIPMENT WHICH MAY BE**
3 **COLLOCATED?**

4 A. In its Advanced Services Order, the FCC described the equipment eligible for
5 collocation as including DSLAMS, routers, ATM multiplexers, and remote
6 switching modules.³⁷ In addition, the FCC specified in section 51.323 of its rules,
7 which addresses collocation, that “[a]n incumbent LEC shall permit the
8 collocation of any type of equipment used or useful for interconnection or access
9 to unbundled network elements.”³⁸ This same rule further stated that equipment
10 qualifying for collocation included:

11 (1) Transmission equipment including, but not limited to, optical
12 terminating equipment and multiplexers, and

13 (2) Equipment being collocated to terminate basic transmission
14 facilities pursuant to §§ 66.1401 and 64.1402 of this chapter as of
15 August 1, 1996.

16 (3) Digital subscriber line access multiplexers, routers,
17 asynchronous transfer mode multiplexers, and remote switching
18 modules.

19 In every case, the FCC cites complete items of network equipment, not piece-
20 parts or sub-components that make up these complete items of network
21 equipment. This demonstrates that the FCC does not consider such piece-parts or
22 sub-components to be equipment eligible for collocation.

23

24 **Q. HAVE THESE FCC RULES BEEN VACATED BY THE COURTS?**

³⁷ Id., paragraph 28.

³⁸ 47 C.F.R. §51.323(b).

1 A. Yes. The Act requires an incumbent LEC to provide "collocation of equipment
2 necessary for interconnection or access to unbundled network elements."³⁹ The
3 D.C. Circuit Court of Appeals recently decided that "necessary" is a more
4 stringent standard than just "used and useful,"⁴⁰ as had been required by the
5 FCC's collocation rules. Instead, the "necessary" standard more nearly describes
6 a condition that, without collocating such equipment, a CLEC would simply not
7 be able to interconnect or access UNEs.

8

9 **Q. WHAT IS THE SIGNIFICANCE OF THESE RULES HAVING BEEN**
10 **VACATED?**

11 A. As can be seen in these rules, the FCC identified only complete items of
12 equipment. This FCC rule was vacated because it authorized collocation of any
13 equipment that was "used and useful" for interconnection or access to UNEs,
14 rather than being "necessary" for those tasks. However, the now-vacated rule
15 indicates that, even under its too-expansive reading of the Act, the FCC never
16 viewed sub-components or piece-parts of complete items of equipment as meeting
17 the collocation standard.

18

19 **Q. CAN YOU DESCRIBE IN MORE DETAIL THE RT LINE CARD THAT**
20 **THE CLECS WISH TO OWN OR DESIGNATE, AND THEN**
21 **COLLOCATE?**

22 A. Yes. The type of Project Pronto RT line card currently available from Alcatel, the
23 manufacturer of the Litespan platform, is the ADSL Digital Line Unit ("ADLU")
24 card. The ADLU card is inserted into a shelf within a complete NGDLC RT

³⁹ 251(c)(6), emphasis added.

1 equipment unit. This ADLU card contains some of the electronic circuitry that
2 enables the NGDLC RT to perform the various signal-conversion and
3 multiplexing functions for an end user's ADSL signal. The ADLU card cannot
4 perform any of these functions by itself, as it is only a piece-part or sub-
5 component of the overall NGDLC RT equipment unit. To use an analogy, the
6 ADLU card is similar to a gear within a wrist-watch. The gear is not the device
7 that provides the time to the wearer of the watch, but instead, is only a piece-part
8 of the watch, and merely works in combination with the rest of the parts of the
9 watch to keep time.

10

11 **Q. DOES THE ADLU CARD MEET THE FCC'S DESCRIPTION OF**
12 **EQUIPMENT THAT MAY BE COLLOCATED?**

13 A. No. An ADLU card is inconsistent with the FCC's equipment definition in
14 section 51.323(b)(1-3) of its rules. As I explained immediately above, an ADLU
15 card (or any other type of circuit pack) is only a piece-part or sub-component of a
16 complete item of equipment such as Ameritech Illinois' NGDLC RT. This card
17 cannot function alone, as can a complete item of equipment. In other words, it
18 cannot function without (1) the additional NGDLC RT cards that provide
19 common functions for the RT; (2) the other NGDLC RT hardware components
20 such as the shelves, connectors, and wiring that house and interconnect all of the
21 line cards and common cards within the RT; and (3) the system software in the
22 NGDLC RT. Therefore, the ADLU card does not constitute an item of equipment
23 that qualifies for collocation.

⁴⁰ GTE Service Corp. v. FCC, 205 F.3d 416, 422-23 (D.C. Cir. 2000).

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2 **Q. HOW DOES THE FCC'S RECENT PROJECT PRONTO ORDER**
3 **CHARACTERIZE THE ADLU CARD?**

4 A. The FCC's Project Pronto Order agrees with the characterization of an ADLU
5 card as just a piece-part, stating that the

6 “plug-in ADLU Card is only one component of an NGDLC
7 system. An NGDLC system typically contains several ‘channel
8 bank assemblies,’ which are multiplexers used to provide service
9 to end users. In each channel bank assembly, a carrier ‘plugs in’
10 cards that are used to provide specific telecommunications
11 services. ... The ADLU Card is a plug-in card used to provide
12 ADSL service from an NGDLC system. The ADLU Card works
13 in conjunction with other plug-in cards and software to provide
14 such service. In addition to the channel bank assemblies and the
15 associated plug-in cards, DLC systems (including NGDLC
16 systems) also contain a common control assembly that contains
17 multiplexing, power, and other capabilities.”⁴¹

18

19 **Q. DID THE FCC'S PROJECT PRONTO ORDER FIND THAT THE ADLU**
20 **CARD IS FUNCTIONALLY EQUIVALENT TO A DSLAM, WHICH IS**
21 **AN ITEM OF EQUIPMENT THAT MEETS THE COLLOCATION**
22 **STANDARDS SET BY THE FCC?**

23 A. Although the FCC's Project Pronto Order stated that the ADLU card is the
24 functional equivalent of a DSLAM,⁴² the ADLU card is still not a complete item
25 of equipment allowed for collocation. In contrast, a CLEC can collocate full
26 items of equipment such as its own stand-alone DSLAM or its own complete
27 NGDLC RT at a Ameritech Illinois RT site, where space and environment factors
28 (heat dissipation and power) allow. The CLEC's ability to collocate such
29 complete items of equipment at a Project Pronto RT site will be enhanced through

⁴¹ Project Pronto Order, footnote 11.

⁴² Id., paragraph 14.

1 SBC's voluntary commitments attached to and adopted by the FCC's Project
2 Pronto Order.⁴³
3

4 **Q. DID THE FCC ADDRESS THE CHARACTERISTICS OF COLLOCATED**
5 **EQUIPMENT IN ANY OTHER PROCEEDING?**

6 A. Yes. In its Expanded Interconnection Order, the FCC also stated that, under
7 physical collocation, "the interconnecting party pays for LEC central office space
8 in which to locate the equipment necessary to terminate its transmission links."⁴⁴
9 The ADLU card again does not meet the FCC's definition of collocation
10 equipment because it has no physical termination capability.
11

12 **Q. DOES THE CLEC PROPOSAL COMPLY WITH THE ACT AND THE**
13 **FCC'S REQUIREMENT THAT COLLOCATION IS ONLY REQUIRED**
14 **FOR INTERCONNECTION OR ACCESS TO UNES?**

15 A. No. Placement of an ADLU card into Ameritech Illinois' NGDLC RT does not
16 provide CLECs with access to UNES currently available at an RT, nor does it
17 provide for interconnection between Ameritech Illinois' network and a CLEC's
18 network for the mutual exchange of traffic.
19

20 **Q. WHICH UNES CAN BE ACCESSED BY COLLOCATING IN AN RT?**

21 A. There are only two Ameritech Illinois UNES that may be accessible to a CLEC at
22 an RT site. The first is unbundled dark fiber. Unbundled dark fiber is available at
23 an RT site only if the RT is fed by fiber cable, and if any of the fiber strands are

⁴³ Id., paragraphs 34, 35, and 61; and Appendix A, paragraph 5.

⁴⁴ In the Matter of Expanded Interconnection with Local Telephone Company Facilities; Amendment of the Part 69 Allocation of General Support Facility Costs, CC Docket No. 91-141, Report and Order and

1 spare and unlit. The second is unbundled copper distribution subloops, including
2 the full subloop or just the high frequency portion of the subloop. These
3 unbundled subloops are available at an RT only if the CLEC's collocated
4 equipment is cabled to the nearest cross-connect access point to those subloops
5 (e.g., the SAI cabinet), or to the "engineering controlled splice" referred to in
6 SBC's voluntary commitments attached to the FCC's Project Pronto Order.⁴⁵

7
8 **Q. CAN A CLEC OBTAIN ACCESS TO UNES AVAILABLE AT AN RT BY**
9 **PLACING AN ADLU CARD INTO AMERITECH ILLINOIS' NGDLC**
10 **EQUIPMENT?**

11 A. No. The ADLU card is not capable of providing access to any UNE. As I
12 previously explained, the ADLU card is only a sub-component of the complex
13 system of electronics and software that collectively make up the complete
14 functionality of a NGDLC RT. In fact, the ADLU is merely one sub-component
15 of one physical part (*i.e.*, the Project Pronto NGDLC RT) of Ameritech Illinois'
16 Project Pronto architecture. There are no means to physically cross-connect the
17 ADLU card to any UNE at the RT; instead, it can only be physically inserted into
18 the rest of the NGDLC RT.

19
20 **Q. ARE THERE OTHER REASONS WHY THE LINE CARD SHOULD NOT**
21 **BE OWNED OR DESIGNATED AND COLLOCATED BY THE CLECS?**

22 A. Yes. These other reasons include adverse impacts on (1) the usable capacity of
23 the NGDLC RTs, (2) the bandwidth of the OC-3c data transport, (3) service

Notice of Proposed Rulemaking, FCC 92-440 (released October 19, 1992) ("Expanded Interconnection Order"), paragraph 39.

⁴⁵ Project Pronto Order, Appendix A, paragraph 5.

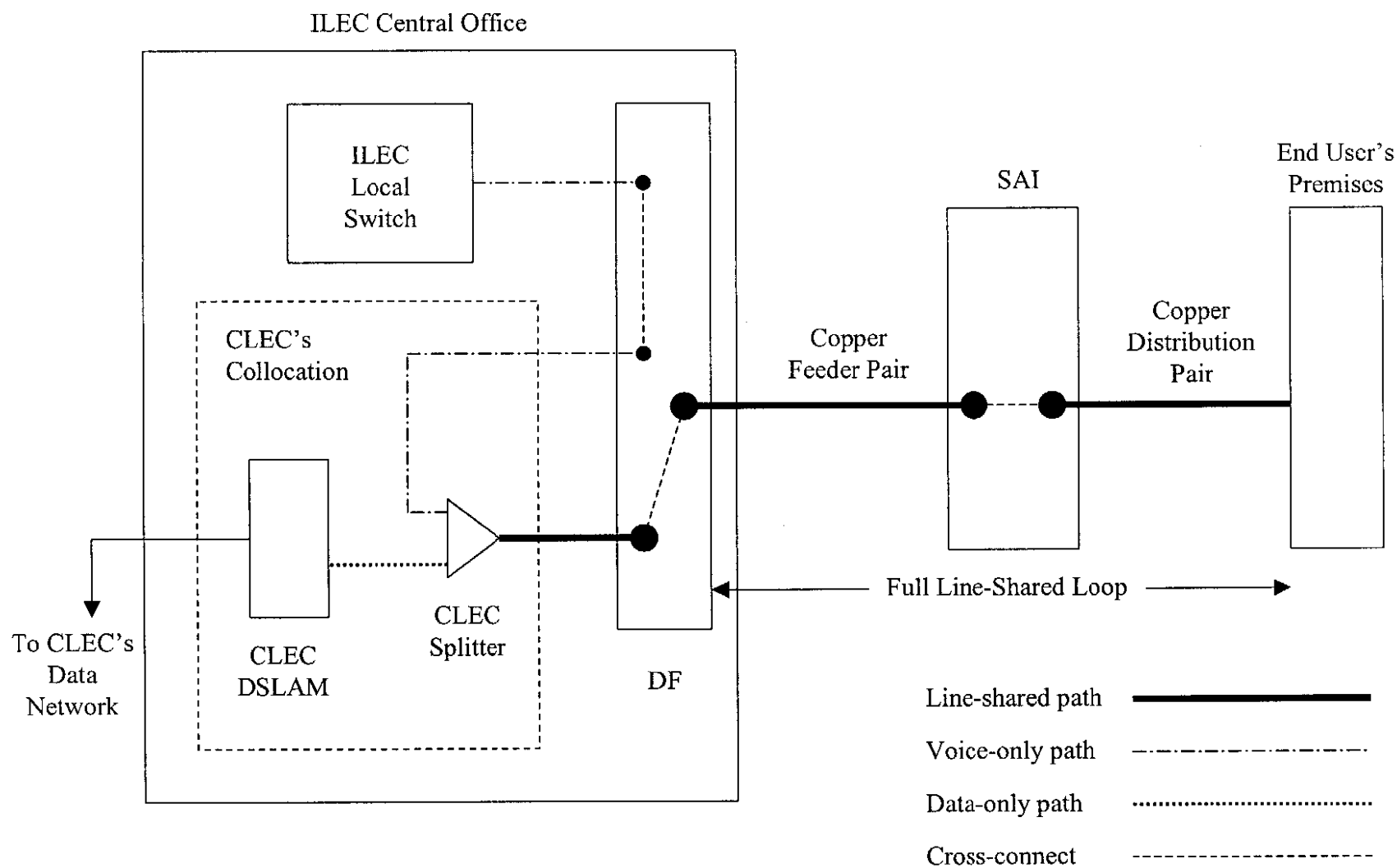
1 provisioning, and (4) maintenance and repair. Mr. James Keown addresses all of
2 these issues in his testimony.

3

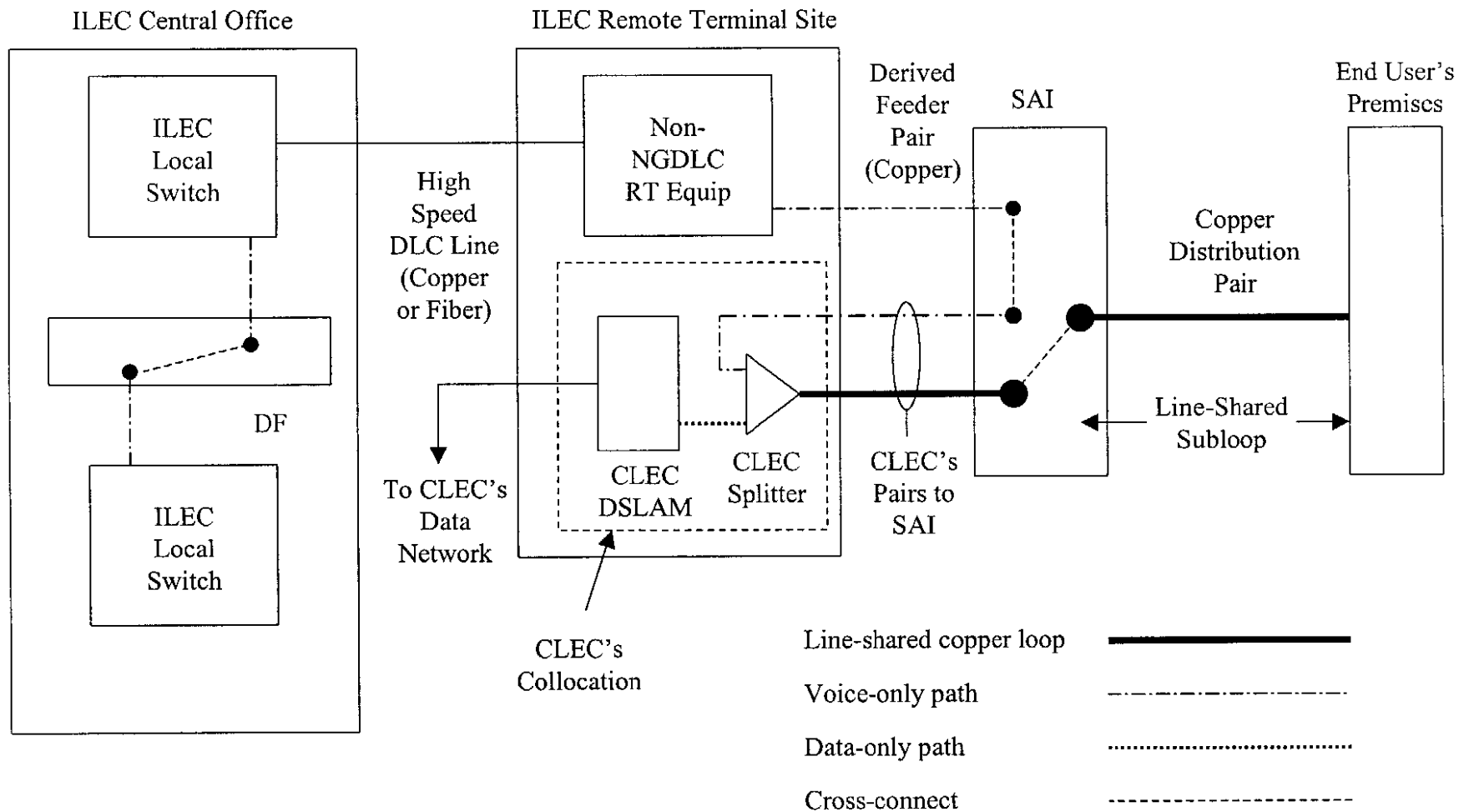
4 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY ON**
5 **REHEARING?**

6 **A. Yes.**

Line-Sharing Over Full Copper Loop



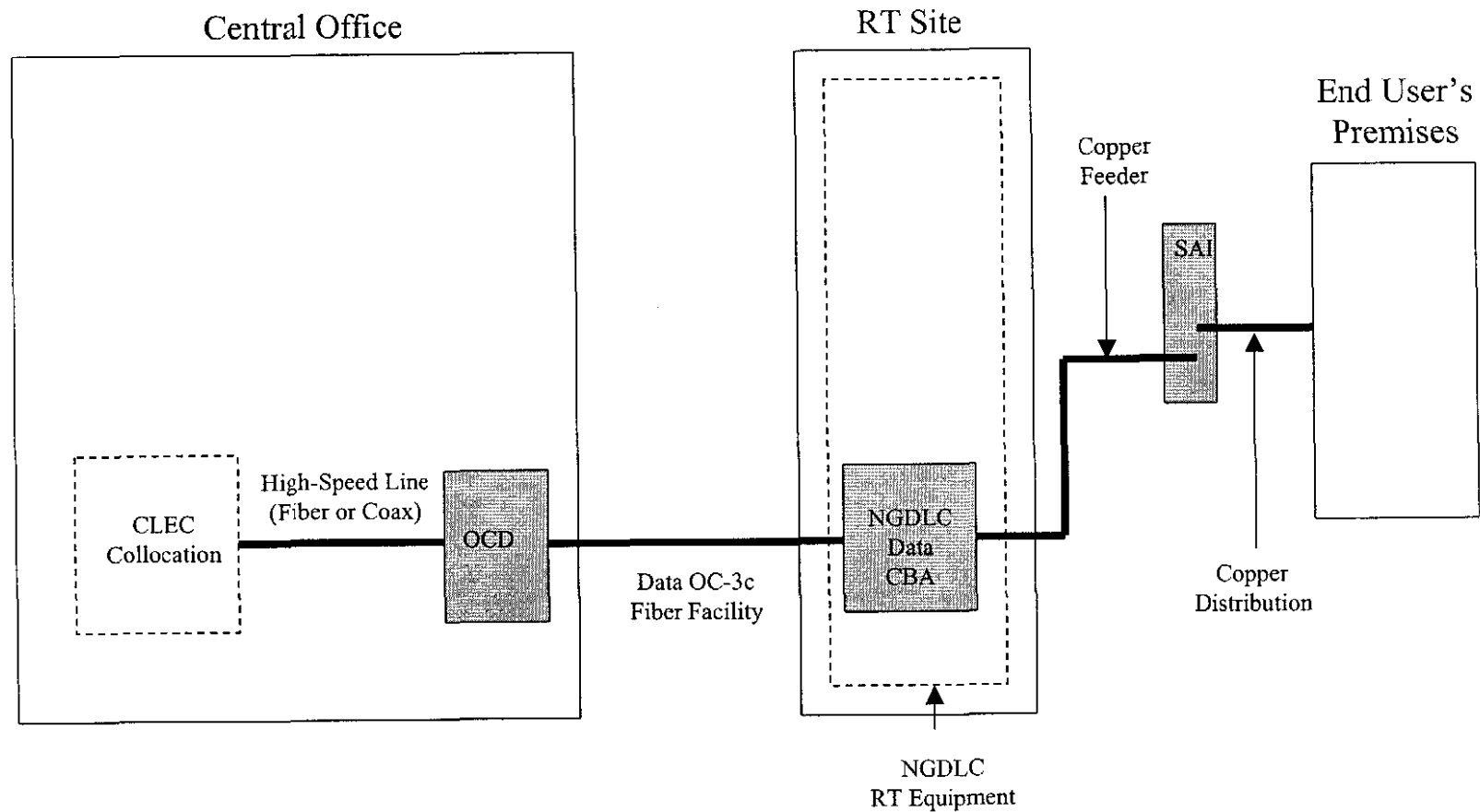
Line-Sharing Over a Copper Distribution Subloop



Project Pronto

Attachment JPL-3

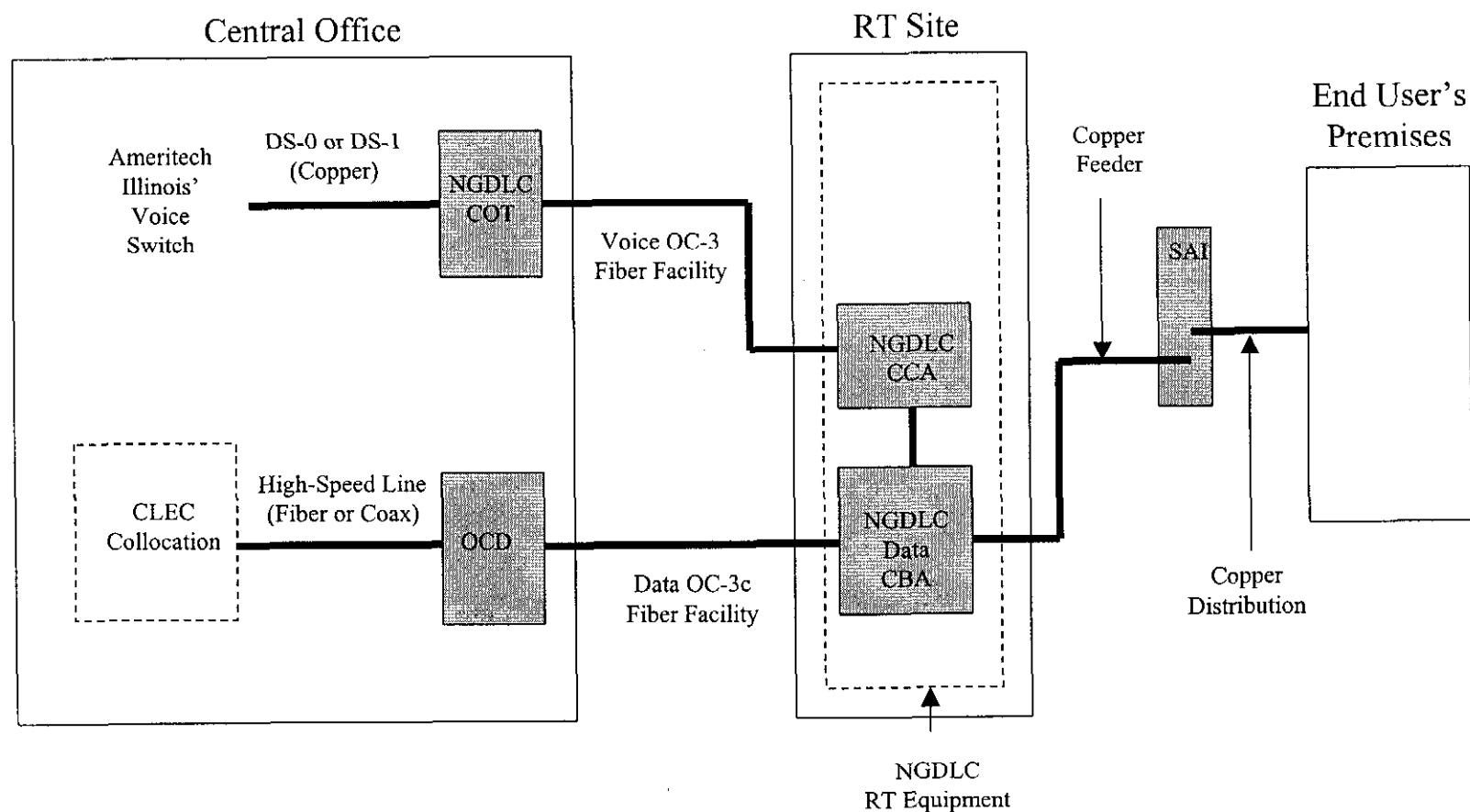
“Data-Only” Broadband Service Arrangement (No POTS)



Project Pronto

Attachment JPL-4

“Line-Shared Subloop” Broadband Service Arrangement (ILEC POTS)



Project Pronto

Attachment JPL-5

“Combined Voice and Data” Broadband Service Arrangement (CLEC POTS)

